RESEARCH HIGHLIGHT

August 2004

Socio-economic Series 04-022

UNIVERCITY: ASSESSING CONSUMER DEMAND FOR SUSTAINABLE DEVELOPMENT

BACKGROUND

UniverCity is a new community that is being developed at Simon Fraser University (SFU) in Burnaby, B.C. It is intended to be a sustainable community that will eventually house 10,000 residents in 4,500 homes and contain approximately 250,000 ft^2 of commercial and office space. Simon Fraser UniverCity Community Corporation is a wholly owned subsidiary of SFU and is the land developer for this project.

Canada Mortgage and Housing Corporation (CMHC) frequently works with local stakeholders and other public or private partners to encourage greater housing choice, improve affordability, or support housing innovation. To encourage market adoption of Healthy Housing™, and to encourage developers to "push the envelope" in terms of greater energy efficiency, improved indoor air quality, and water conservation, CMHC, Greater Vancouver Regional District (GVRD), Natural Resources Canada and UniverCity participated in an Integrated Design Charrette in September 2002. This charrette provided the opportunity for developers and their design teams, to explore ways of incorporating UniverCity's *Green Building Guidelines* into three development proposals. An online version of the Development Guidelines can be found at **www.univercity.ca**

Experts with experience in the integrated design process acted as facilitators and provided support to the design teams. Resource people complemented the developers' teams, bringing expertise as quantity surveyors, landscape specialists, sustainability consultants, solar energy advisors, municipal planners and utility representatives.

Artist's rendering of UniverCity, phase one
Photo courtesy of UniverCity Community Corporation

As the two-day charrette progressed, several participants noted a distinct lack of information on market demand for "greener," healthier and more sustainable housing. Since some "green" building design elements may incur additional up-front construction costs, it is critical to understand the level of consumer interest and willingness to pay for such features. As one of the sponsors for this event, CMHC agreed to conduct a study to quantify consumer demand for Healthy Housing in order to demystify and bring clarity to the local debate on "where homebuyers are at" in terms of sustainable development. This study was designed to identify the features that appeal to consumers and how much extra they would be willing to pay for these features.

PROJECT OBJECTIVES

The objectives of this survey are as follows:

- Determine the level of demand for living in a medium-density residential community (ranging from 3-storey townhouses to 12-storey apartment-style condominiums).
- Determine the level of demand and willingness to pay for urban development that incorporates CMHC's Healthy Housing principles.
- Determine the level of demand and willingness to pay for specific Healthy Housing features such as environmentally appropriate building practices, healthy finishing materials, greater energy efficiency and flexible suites.
- Identify the most effective marketing channels and promotional materials for these types of consumers.
- Segment demand for a specific project (i.e., UniverCity) from the demand for living in a conventional development elsewhere in Greater Vancouver.

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PROJECT METHODOLOGY

This project included the following two phases:

Qualitative Phase - March 2003	**Qualitative Phase** - April, May 2003
Focus Group Interviews	**Telephone Survey**
Two focus group sessions were conducted to improve the wording of the Healthy Housing survey.	Included residents within GVRD planning to purchase a home sometime during the next five years

To better understand demand for sustainable residential development, CMHC (in conjunction with market research firm POLLARA™) conducted a survey of consumers intending to buy a home. In total, 150 telephone interviews were completed with Greater Vancouver residents planning to purchase a home during the next five years. All interviews were conducted by POLLARA's tele-research centre in Vancouver between April 23, 2003 and May 11, 2003. Respondents were screened to ensure that they were very likely or somewhat likely to purchase a home within the next five years. The margin of error associated with a sample size of 150 is ±8.0 per cent, 19 times out of 20.

The telephone survey represents the second phase of this Directed Research Project. The first phase, conducted in February 2003, was qualitative and consisted of two focus groups of potential homebuyers in the Lower Mainland. The results of the qualitative research were used to develop the content of the subsequent questionnaire. The key findings of the focus groups can be found in the full report.

Interviews were conducted throughout the Lower Mainland with a geographically representative sample.

Order of Questions

Section	**Topic Area/Description**	**No. of Questions**
General	Qualifying questions	3
	Current living situation	1
	Important considerations for buying a home	2
Healthy Housing	Indoor air quality/high-efficiency ventilation	3
	Energy efficiency	4
	Water conservation	3
	Building materials/embodied energy	4
	Adaptability of the home	2
	Transportation and parking	4
Specific to UniverCity	Awareness/interest in UniverCity at SFU	2
	Appeal of Healthy Housing principles	2
Willingness to Pay	Willingness to pay 2%, 5% or 10% more for a home with Healthy Housing features	2
Demographics	Age, own/rent, education, marital status, household income	6
	Total Questions:	**38**

HOUSING FEATURES CONSUMERS CONSIDER IMPORTANT

In order to understand which housing features homebuyers consider when purchasing a new home, respondents were read a list of features and asked to rate the importance of each. Ratings were made on a scale of 1 to 10, where 1 is not at all important and 10 is extremely important.

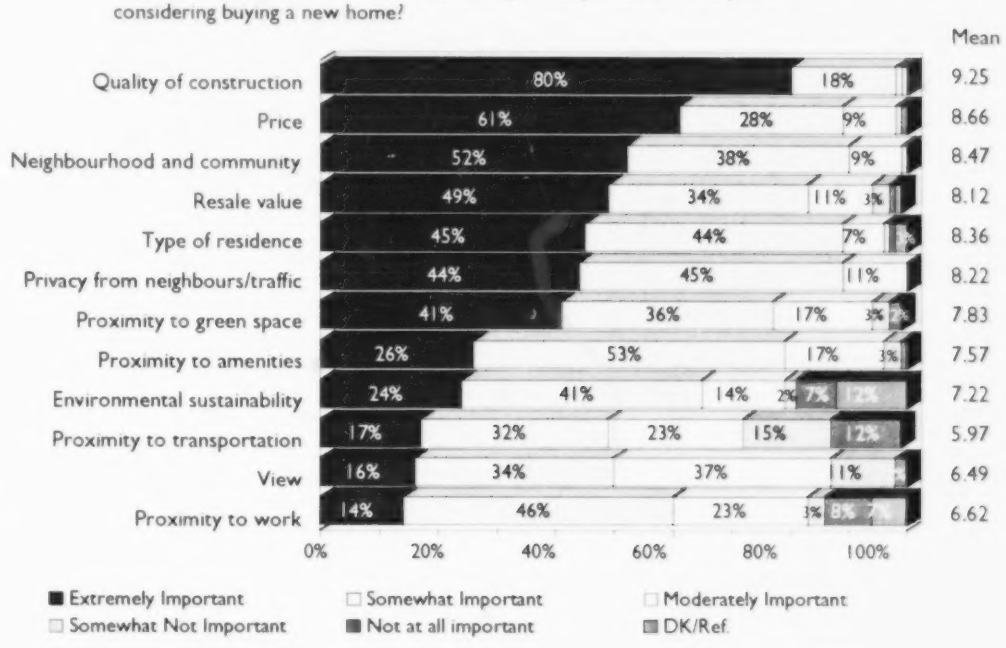
According to those surveyed, "quality of construction" is the most important feature to consider when purchasing a new home, receiving the highest average rating of 9.3 out of 10. Highly important features include the following (in descending order):

- Quality of construction (average rating of out of 10)
- Housing price (average rating of 8.7)
- Neighbourhood and community character (average rating of 8.5)
- Type of residence (average rating of 8.4)
- Privacy from neighbours and traffic (average rating of 8.2)
- Resale value (average rating of 8.1)
- Proximity to green space and parks (average rating of 7.8)
- Proximity to amenities such as schools, grocery stores, shops, etc. (average rating of 7.6)
- **Environmental sustainability** (average rating of 7.2)
- Proximity to work (average rating of 6.6)
- View (average rating of 6.5)
- Proximity to transportation options (SkyTrain, buses, etc.) (average rating of 6.0)

"Environmental sustainability" appeared further down the list in terms of ranked importance. Its relatively lower ranking was likely due to the fact that this question appeared at the start of the survey, before a series of informative questions were asked about Healthy Housing. At that point in the survey, interviewees may have been unsure what environmental sustainability actually meant.

Important Housing Features

Question: Using a scale of 1 to 10 (where 1 is not at all important and 10 is extremely important), how important are the following housing features when you are considering buying a new home?


Mean
Quality of construction 80% 18% 9.25
Price 61% 28% 9% 8.66
Neighbourhood and community 52% 38% 9% 8.47
Resale value 49% 34% 11% 3% 8.12
Type of residence 45% 44% 7% 8.36
Privacy from neighbours/traffic 44% 45% 11% 8.22
Proximity to green space 41% 36% 17% 3% 7.83
Proximity to amenities 26% 53% 17% 3% 7.57
Environmental sustainability 24% 41% 14% 2% 7% 12% 7.22
Proximity to transportation 17% 32% 23% 15% 12% 5.97
View 16% 34% 37% 11% 6.49
Proximity to work 14% 46% 23% 3% 8% 7% 6.62
0% 20% 40% 60% 80% 100%
Extremely Important
Somewhat Important
Moderately Important
Somewhat Not Important
Not at all important
DK/Ref.

Telephone survey sample size = 150 respondents

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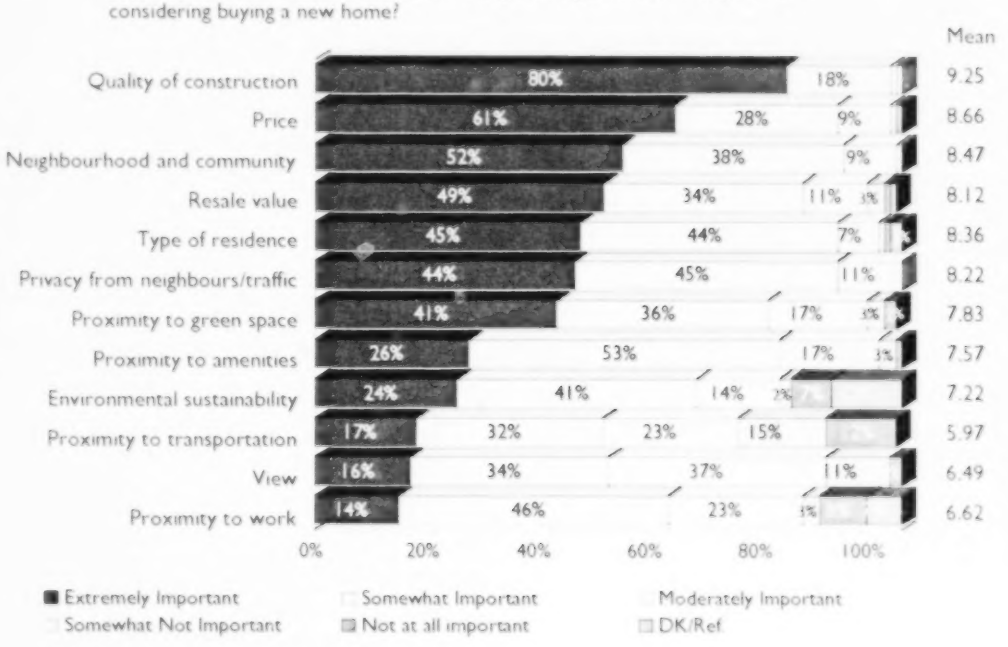

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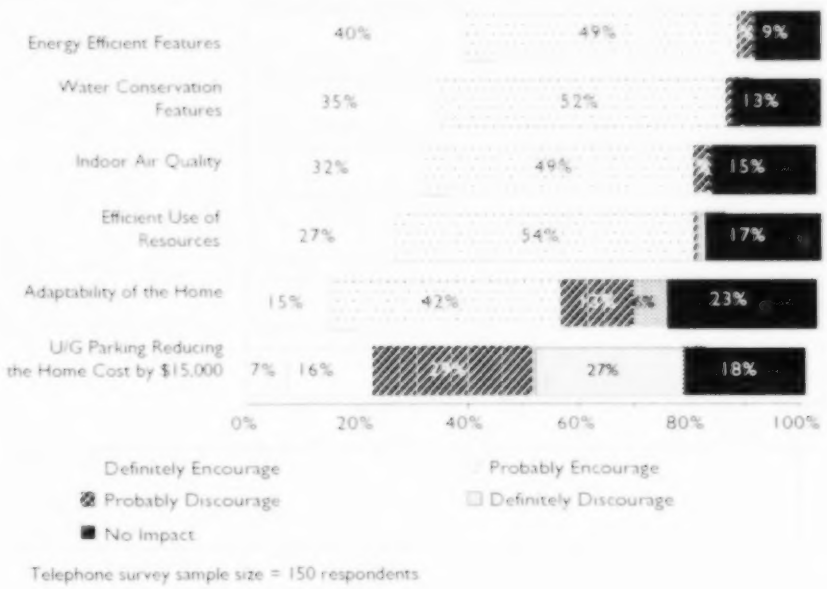
CONSUMER INTEREST IN HEALTHY HOUSING

Respondents were told that some newly constructed homes have a number of features and benefits that may not be available in older homes. Respondents were also informed that these features provide benefits in the areas of indoor air quality, energy efficiency, water conservation, efficient use of resources, adaptability of the home, and transportation and reduced parking spaces. Using a scale of "definitely encourage," "probably encourage," "probably discourage," "definitely discourage," or "no impact," respondents were asked to rate the appeal of various features of Healthy Housing expressed as benefits with an associated cost[1]. By juxtaposing a sustainable feature with an associated cost, the overall "trade-off" appeal of the benefit was determined.

[1] Costs were developed in collaboration with Rethinking Building Inc, a Vancouver-based green building consultancy. They were derived from case study analysis of similar projects. Given that costs vary widely depending on building type, location, etc, costs were described on a "per feature" basis and were intended to be indicative only in order to provide context to the question.

Overall Ratings of Healthy Housing Features



Telephone survey sample size = 150 respondents

Overall, energy-efficiency features generate the most interest, with 89 per cent of respondents indicating that these features would encourage their home purchase decision. The appeal of these features likely relates to the potential long-term cost savings that they would provide.

The next most popular features include water conservation, improved indoor air quality and ventilation, and efficient use of resources, with 81 per cent to 87 per cent of respondents saying that these features would encourage a purchase decision.

Meanwhile, only 57 per cent indicate that features related to adaptability of the home would encourage a purchase decision. The lower appeal suggests that although these features might deliver flexibility, the additional cost detracts from the buying decision. Directional evidence suggests that homebuyers who are most interested in home adaptations such as secondary suites and home offices are first-time homebuyers and those under the age of 35. It is this group of homebuyers that can see the financial logic of buying a unit that includes a code-compliant secondary suite or a home office.

Meanwhile, only 23 per cent of respondents indicate that the cost savings associated with reduced numbers of underground parking stalls would encourage a purchase decision. At first glance, it seems that a reduced number of underground parking spaces might discourage more potential homebuyers rather than encourage them. Clearly, a large number of homebuyers are attached to their vehicles, and convincing these buyers to give up their cars would be difficult. However, the fact that nearly one quarter of respondents (23 per cent) *are* willing to give up an underground parking stall can be considered an encouraging statistic, given high levels of auto use in Canada.

The next section summarizes survey responses regarding the appeal of specific Healthy Housing features.

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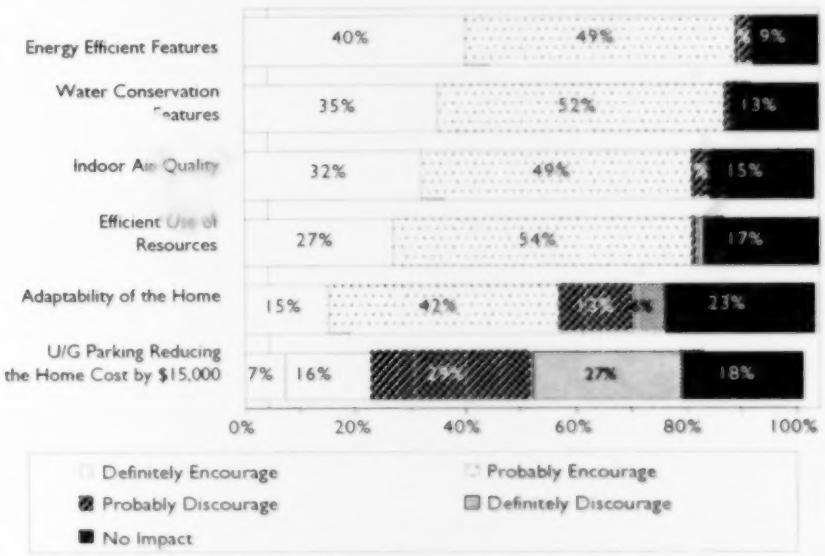

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ENERGY EFFICIENCY

Respondents were read a list of benefits related to improved energy efficiency in new homes. The relatively higher appeal of these features suggests that consumers recognize the long-term cost savings that can be achieved through improved energy efficiency.

% saying feature would encourage purchase decision	Breakdown	The feature as described in the telephone survey
95%	61% definitely 34% probably	Energy-efficient appliances that reduce energy costs and use water more efficiently
87%	51% definitely 36% probably	Individual metering and programmable thermostats allowing you to control energy consumption and heating costs
76%	33% definitely 43% probably	Increased insulation, tighter exterior walls and roof construction, and high-efficiency windows and doors let less heat escape from home
74%	34% definitely 40% probably	A high-efficiency hot water (hydronic) heating system instead of electric baseboard heaters

WATER CONSERVATION

The impact of features related to domestic water conservation was also examined. Results show that all three features mentioned in the survey would encourage a purchase decision.

% saying feature would encourage purchase decision	Breakdown	The feature as described in the telephone survey
89%	58% definitely 31% probably	Water-efficient landscaping to help conserve water and reduce maintenance
87%	50% definitely 37% probably	Recycling of rainwater for landscape irrigation to conserve treated drinking water and reduce the load on sewer system
75%	43% definitely 32% probably	Low-flow plumbing fixtures (e.g., dual-flush toilets and aerators attached to faucets) helping to conserve water

INDOOR AIR QUALITY

Respondents were read a list of features that would improve indoor air quality and ventilation, and were asked how much each feature would encourage or discourage their purchase decision. Indoor air quality features were rated relatively high in appeal, implying that homebuyers are willing to pay for features that are perceived to benefit their health.

% saying feature would encourage purchase decision	Breakdown	The feature as described in the telephone survey
79%	41% definitely 38% probably	Hardwood and ceramic tiles that are easier to clean than wall-to-wall carpet and prevent build up of lung irritants and dirt
75%	35% definitely 40% probably	Non-vapour-emitting materials that reduce airborne pollutants and minimize respiratory aggravation and allergies
75%	33% definitely 42% probably	High-efficiency ventilation system ensuring that the air entering the home is as clean as possible and evenly distributed to all rooms

EFFICIENT USE OF RESOURCES

Questions were also asked concerning efficient use of material resources. The most appealing of these features are composting and recycling facilities, with 91 per cent of respondents indicating that this would encourage their purchase decision. The high appeal of this feature might be due in part to low initial cost and widespread acceptance of recycling facilities across Canada. In contrast, consumers are less sure of the benefits of purchasing a home constructed with materials that require less energy to produce or are easily recycled.

% saying feature would encourage purchase decision	Breakdown	The feature as described in the telephone survey
91%	53% definitely 38% probably	Composting and recycling facilities
76%	43% definitely 33% probably	Homes built using no old-growth wood
72%	30% definitely 42% probably	Homes that include certified sustainably farmed wood for cabinets and shelves
68%	20% definitely 48% probably	Homes built using materials that require less energy to produce or easily recycled

CONSUMER INTEREST IN UNIVERCITY

The UniverCity development was described to all survey respondents. Respondents were then asked to consider the location and all of the features and benefits of this development, including the Healthy Housing features discussed earlier. Overall, 32 per cent of respondents indicate that they are interested in purchasing a UniverCity home, while 60 per cent are not. Another 7 per cent were unsure.

Respondents who are interested in purchasing a UniverCity home were also asked why they would choose this particular development. Of the 32 per cent that are interested in a UniverCity home, 60 per cent mention the location, 30 per cent like the proximity of the location to Simon Fraser University, and 20 per cent like the healthy environment and green spaces. It is noteworthy that the Healthy Housing features of the UniverCity development are of interest to only 10 per cent of all potential homebuyers that express interest in this development.

Approximately 20 per cent of all potential homebuyers in Greater Vancouver would be interested in UniverCity due to its general location; 10 per cent like its proximity to SFU, and 7 per cent prefer the healthy environment and green spaces. Approximately 3 per cent of all homebuyers in Greater Vancouver would be interested in UniverCity because of its Healthy Housing features.

WILLINGNESS TO PAY MORE FOR A HOME WITH HEALTHY HOUSING FEATURES

An important objective of the survey was to understand if consumers in Greater Vancouver are willing to pay more for a home with Healthy Housing features. The results suggest that a niche segment of homebuyers interested in purchasing a multi-residential unit at UniverCity would be willing to pay 6.5 per cent above market value for a one-bedroom unit, 2.5 per cent more for a two-bedroom unit (due to higher price sensitivity), and 4.5 per cent more for a three-bedroom unit. These results are summarized below:

Willingness to Pay for Healthy Housing (Among Niche Segment of Vancouver Homebuyers Interested in UniverCity)	
Unit	**Price Above Market Price Willing to Pay**
1-bedroom	6.5%
2-bedroom	2.5%
3-bedroom	4.5%

RECOMMENDED COMMUNICATIONS AND MARKETING STRATEGY

- When communicating with homebuyers about Healthy Housing, emphasis should be placed on features that are recognized as delivering significant cost savings (such as those related to energy efficiency).
- In order to broaden the appeal of adaptable/flexible housing, it is necessary to communicate the potential cost savings of adaptations such as a secondary rental suites, or the convenience of a home office within a new home.
- Reducing the number of parking spaces (for reasons of environmental sustainability) lacks universal appeal, and might deter some homebuyers. However, younger homebuyers are more receptive to this strategy. Although "green" developments may always include at least some parking in order to appeal to a broad consumer market, reducing the number of underground parking stalls yields savings in construction costs and could lower the purchase price of multi-residential units, thus benefiting homebuyers.
- Developments like UniverCity should market themselves primarily on the most appealing Healthy Housing features. Promotional material should highlight the long-term cost savings, potential health benefits, and low additional cost (where applicable) of these features.

CMHC Project Manager: Norm Connolly, Senior Researcher, B.C. and Yukon Region

Consultant: POLLARA™, Strategic Public Opinion and Market Research

Housing Research at CMHC

Under Part IX of the *National Housing Act*, the Government of Canada provides funds to CMHC to conduct research into the social, economic and technical aspects of housing and related fields, and to undertake the publishing and distribution of the results of this research.

This fact sheet is one of a series intended to inform you of the nature and scope of CMHC's research.

To find more *Research Highlights* plus a wide variety of information products, visit our Web site at

www.cmhc.ca

or contact:

Canada Mortgage and Housing Corporation
700 Montreal Road
Ottawa, Ontario
K1A 0P7

Phone: 1 800 668-2642
Fax: 1 800 245-9274

OUR WEB SITE ADDRESS: www.cmhc.ca

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